

Department of Energy

§ 431.42

For continuous rated machines, the temperature test shall continue until there is 1 °C or less change in temperature rise over a 30-minute time period.

(iv) Page 47, at the top of 10.2 Form B, immediately after the line that reads "Rated Load Heat Run Stator Winding Resistance Between Terminals," the following additional line applies:

Temperature for Resistance Correction (t_r) = °C (See 6.4.3.2).

(v) Page 47, at the bottom of 10.2 Form B, after the first sentence to footnote t_r , the following additional sentence applies:

The values for t_s and t_r shall be based on the same method of temperature measurement, selected from the four methods in subclause 8.3.

(vi) Page 47, at the bottom of 10.2 Form B, below the footnotes and above "Summary of Characteristics," the following additional note applies:

NOTE: The temperature for resistance correction (t_r) is equal to $[(4) - (5) + 25 \text{ °C}]$.

(vii) Page 48, item (22), the torque constants "k = 9.549 for torque, in N·m" and "k = 7.043 for torque, in lbf·ft" do not apply. Instead, the following applies:

"k₂ = 9.549 for torque, in N·m" and "k₂ = 7.043 for torque, in lbf·ft."

(viii) Page 48, at the end of item (27), the following additional reference applies:

"See 6.4.3.2".

(ix) Page 48, item (29), "See 4.3.2.2, Eq. 4," does not apply. Instead the following applies:

Is equal to $(10) \cdot [k_1 + (4) - (5) + 25 \text{ °C}] / [k_1 + (7)]$, see 6.4.3.3".

3. Amendments to test procedures.

Any revision to IEEE Std 112-1996 Test Method B with correction notice of January 20, 1998, to NEMA Standards Publication MG1-1993 with Revisions 1 through 4, or to CSA Standard C390-93 Test Method (I), subsequent to promulgation of this appendix A, shall not be effective for purposes of test procedures required under part 431 and this appendix A, unless and until part 431 and this appendix A are amended.

Subpart C—Energy Conservation Standards

§ 431.41 Purpose and scope.

This subpart contains energy conservation standards for certain types of covered equipment pursuant to Part C—Certain Industrial Equipment, Energy Policy and Conservation Act, as amended (42 U.S.C. 6211 *et seq.*).

§ 431.42 Energy conservation standards and effective dates.

(a) Each electric motor manufactured (alone or as a component of another piece of equipment) after October 24, 1997, or in the case of an electric motor which requires listing or certification by a nationally recognized safety testing laboratory, after October 24, 1999, shall have a nominal full load efficiency of not less than the following:

Motor Horsepower/Standard Kilowatt Equivalent	Nominal Full Load Efficiency					
	Open Motors (Number of poles)			Enclosed Motors (Number of poles)		
	6	4	2	6	4	2
1/75	80.0	82.5	80.0	82.5	75.5
1.5/1.1	84.0	84.0	82.5	85.5	84.0	82.5
2/1.5	85.5	84.0	84.0	86.5	84.0	84.0
3/2.2	86.5	86.5	84.0	87.5	87.5	85.5
5/3.7	87.5	87.5	85.5	87.5	87.5	87.5
7.5/5.5	88.5	88.5	87.5	89.5	89.5	88.5
10/7.5	90.2	89.5	88.5	89.5	89.5	89.5
15/11	90.2	91.0	89.5	90.2	91.0	90.2
20/15	91.0	91.0	90.2	90.2	91.0	90.2
25/18.5	91.7	91.7	91.0	91.7	92.4	91.0
30/22	92.4	92.4	91.0	91.7	92.4	91.0
40/30	93.0	93.0	91.7	93.0	93.0	91.7
50/37	93.0	93.0	92.4	93.0	93.0	92.4
60/45	93.6	93.6	93.0	93.6	93.6	93.0
75/55	93.6	94.1	93.0	93.6	94.1	93.0
100/75	94.1	94.1	93.0	94.1	94.5	93.6
125/90	94.1	94.5	93.6	94.1	94.5	94.5
150/110	94.5	95.0	93.6	95.0	95.0	94.5
200/150	94.5	95.0	94.5	95.0	95.0	95.0

(b) For purposes of determining the required minimum nominal full load efficiency of an electric motor that has a horsepower or kilowatt rating between two horsepower or kilowattages listed consecutively in paragraph (a) of this section, each such motor shall be deemed to have a horsepower or kilowatt rating that is listed in paragraph (a). The rating that the motor is deemed to have shall be determined as follows:

(1) A horsepower at or above the midpoint between the two consecutive horsepower shall be rounded up to the higher of the two horsepower;

(2) A horsepower below the midpoint between the two consecutive horsepower shall be rounded down to the lower of the two horsepower, or

(3) A kilowatt rating shall be directly converted from kilowatts to horsepower using the formula, 1 kilowatt = (1/0.746) horsepower, without calculating beyond three significant decimal places, and the resulting horsepower shall be rounded in accordance with subparagraph (b)(1) or (b)(2) of this section, whichever applies.

(c) This section does not apply to definite purpose motors, special purpose motors, and those motors exempted by the Secretary.

[64 FR 54141, Oct. 5, 1999; 65 FR 2227, Jan. 13, 2000]

§ 431.43 Preemption of state regulations.

Any state regulation providing for any energy conservation standard, or other requirement with respect to the energy efficiency or energy use, of an electric motor that is not identical to a Federal standard in effect under this subpart is preempted by that standard, except as provided for in sections 345(a) and 327(b) and (c) of the Act.

Subpart D—Petitions To Exempt State Regulation From Preemption; Petitions To Withdraw Exemption of State Regulation

§ 431.61 Purpose and scope.

(a) The regulations in this subpart prescribe the procedures to be followed in connection with petitions requesting a rule that a State regulation pre-

scribing an energy conservation standard or other requirement respecting energy use or energy efficiency of a type (or class) of covered equipment not be preempted.

(b) The regulations in this subpart also prescribe the procedures to be followed in connection with petitions to withdraw a rule exempting a State regulation prescribing an energy conservation standard or other requirement respecting energy use or energy efficiency of a type (or class) of covered equipment.

§ 431.62 Prescriptions of a rule.

(a) *Criteria for exemption from preemption.* Upon petition by a State which has prescribed an energy conservation standard or other requirement for a type or class of covered equipment for which a Federal energy conservation standard is applicable, the Secretary shall prescribe a rule that such standard not be preempted if he/she determines that the State has established by a preponderance of evidence that such requirement is needed to meet unusual and compelling State or local energy interests. For the purposes of this regulation, the term “unusual and compelling State or local energy interests” means interests which are substantially different in nature or magnitude from those prevailing in the U.S. generally, and are such that when evaluated within the context of the State’s energy plan and forecast, the costs, benefits, burdens, and reliability of energy savings resulting from the State regulation make such regulation preferable or necessary when measured against the costs, benefits, burdens, and reliability of alternative approaches to energy savings or production, including reliance on reasonably predictable market-induced improvements in efficiency of all equipment subject to the State regulation. The Secretary may not prescribe such a rule if he finds that interested persons have established, by a preponderance of the evidence, that the State’s regulation will significantly burden manufacturing, marketing, distribution, sale or servicing of the covered equipment on